

Amendment Dated September 27, 2006

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (currently amended) A method of fabricating at least one polycrystalline silicon plate [[(68, 70)]] with one [[(64, 66)]] of its two faces presenting predetermined relief, said method comprising the steps of:

~~depositing in which method~~ a layer of polycrystalline silicon (60, 62) is deposited on at least one [[(56, 58)]] of the two faces of a support ; (50), ~~the method being characterized by the steps of:~~

embossing said face [[(52, 54)]] of the support [[(50)]] to impart thereto a shape that is complementary to said relief;

depositing said polycrystalline silicon layer [[(60, 62)]] on said embossed face [[(56, 58)]] of the support [[(50)]], the surface [[(64 or 66)]] of said polycrystalline silicon layer situated in contact with said embossed face [[(56 or 58)]] then taking on the shape of said relief;

cutting up said polycrystalline silicon layer [[(60 or 62)]]; and

eliminating said support in order to obtain said polycrystalline silicon plate [[(68 or 70)]].

2. (currently amended) A method according to claim 1, ~~characterized in that~~ wherein said support [[(50)]] is a carbon tape.

3. (currently amended) A method according to claim 2, ~~characterized in that~~ wherein said carbon tape is covered in a protective coating [[(56, 58)]] of pyrolytic graphite after its surface [[(52, 54)]] has been embossed in order to impart thereto said shape complementary to said relief.

4. (currently amended) A method according to ~~any preceding~~ claim 1, ~~characterized in that~~ wherein said face [[(46, 48)]] of the support is embossed in order to impart thereto a shape complementary to said relief [[(44)]] by being pinched between two rollers [[(30, 32)]] and by causing said support [[(28)]] to run between the rollers, the embossing surface of at least one of said rollers having the shape of said predetermined relief.

5. (currently amended) A method according to ~~any one of~~ claim[[s]] 1 to 3, ~~characterized in that~~ wherein said support face is embossed to impart thereto a shape complementary to said relief by embossing a die against said support, the embossing surface of the die having the shape of a plane surface on which said predetermined relief has been embossed.

6. (currently amended) A method according to claim 4 or claim 5, ~~characterized in that~~ wherein said surface of said roller [[(30, 32)]] or of said die is made of a material selected from[[::]] the group consisting of carbon; silicon carbide; silicon; and silicon nitride.

7. (currently amended) A method according to of claim 4 or claim 6, ~~characterized in that~~

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wherein the embossing surfaces of the two rollers [[(30, 32)]] have the shape of said relief, both faces [[(46, 48)]] of said support [[(28)]] then taking on the shape complementary to said relief [[(44)]] during said pinching and running between said rollers.

8. (currently amended) A method according to claims 3 and 7, characterized in that
wherein a polycrystalline silicon layer [[(88, 90)]] is deposited simultaneously and continuously on both of the faces [[(74, 76)]] of said tape [[(72)]] by causing it to pass through a bath of molten silicon [[(80)]] and by pulling it vertically upwards at constant speed [[(86)]] so as to exit said bath, thereby obtaining two layers [[(88, 90)]] of polycrystalline silicon, each having a surface with said relief.

9. (currently amended) A method according to any preceding claim 1, characterized in that wherein said support [[(28, 50, 72, 100)]] is eliminated by being burnt off by heating the assembly constituted by of the support and the polycrystalline silicon to high temperature.

10. (currently amended) A method according to claim 9, characterized in that wherein the face [[(64, 66)]] of the polycrystalline silicon that has the shape of said relief is cleaned after said support has been burnt off.

11. (currently amended) A method according to any preceding claim 1, characterized in that wherein said support [[(28, 50, 72, 100)]] presents a thickness lying in the range 200 μm to 350 μm , and preferably in the range 200 μm to 300 μm .

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12. (currently amended) A method according to ~~any preceding claim 1, characterized in that wherein~~ the thickness of the polycrystalline silicon layer [(68, 70, 88, 90)] lies in the range 40 μm to 300 μm .

13. (currently amended) A method according to claim 3, ~~characterized in that wherein~~ the thickness of said protective coating [(56, 58)] is substantially equal to 1 μm .

14. (currently amended) A method according to ~~any preceding claim 1, characterized in that wherein~~ said face [(46, 48, 52, 54)] of said support [(28, 50)] is embossed in such a manner as to texture said face [(64, 66)] of said polycrystalline silicon layer [(68, 70)], said relief [(44)] being selected in such a manner as to increase the probability of incident light being absorbed in said layer.

15. (currently amended) A method according to claim 14, ~~characterized in that wherein~~ said relief in the form of an array of substantially identical pyramids [(14)].

16. (currently amended) A method according to claim 15, ~~characterized in that wherein~~ the side faces of each of said pyramids [(14)] form angles that are substantially equal to 45° with the base of the pyramid.

17. (currently amended) A method according to claim 15 or claim 16, ~~characterized in~~

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that wherein said pyramids [(14)] are of a height lying in the range 1 μm to 10 μm .

18. (currently amended) A method according to ~~any preceding claim 1, characterized in~~ that wherein said face of said support [(28, 50, 72, 100)] is embossed in such a manner that said surface of said silicon layer is marked with a pattern ~~characterizing~~ resembling said plate or a series of polycrystalline silicon plates.

19. (currently amended) A method according to claim 18, ~~characterized in~~ that wherein said pattern is a bar code.

20. (currently amended) A method according to claim 18, wherein said polycrystalline in that said pattern is a number.

21. (currently amended) A method according to ~~any one of claim[[s]] 14 to 17 and 18 to 20, characterized in~~ that wherein said relief is ~~constituted~~ formed by the texturing said face of said polycrystalline silicon layer and by said pattern characterizing resembling said plate.

22. (currently amended) A method according to ~~any preceding claim 1, characterized in~~ that wherein said grooves are embossed in said face of said support [(100)] in such a manner that ribs of shape complementary to the grooves are formed on said surface of the silicon layer, thereby increasing the stiffness of said layer.

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23. (currently amended) A method according to claim 22, ~~characterized in that wherein~~ said grooves are of a depth of a few tens of micrometers.

24. (currently amended) A method according to claim 22 or claim 23, ~~characterized in that wherein~~ the greatest width of said ribs is no more than a few millimeters.

25. (currently amended) A method according to claim 2 and any one of claims 22 to 24, ~~characterized in that wherein~~ said ribs extend in the length direction of said tape [(100)].

26. (currently amended) A method according to claim 2 and any one of claims 22 to 24, ~~characterized in that wherein~~ said ribs extend in the width direction of said tape [(100)].

27. (currently amended) A method according to claim[[s]] 25 and 26, ~~characterized in that wherein~~ said relief is waffle-shaped, ~~being constituted by having~~ a grid of ribs in the length direction and in the width direction of said tape.

28. (currently amended) A method according to claim[[s]] 7 and 25, ~~characterized in that wherein~~ each of said rollers [(92, 94)] is made up of at least two knurling wheels [(102-108 and 118-124)] each having a face forming an embossing face, said knurling wheels being separated from one another by disks [(110-116 and 126-132)] each having a portion [(134)] projecting beyond the embossing faces of said knurling wheels, said embossing surfaces of the rollers being ~~constituted~~ formed by said embossing faces of said knurling wheels forming the

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texturing and/or the marking of said silicon layer, and said projecting portions [[(134)]] of said disk forming grooves [[(136)]] in the support tape [[(100)]] and forming said relief in the shape of ribs on the layers of silicon.

29. (currently amended) A method according to claim 18 and ~~claim 28, characterized in that~~ wherein each of said rollers [[(92, 94)]] is made up of a succession of knurling wheels [[(102-108 and 118-124)]] separated from one another by disks [[(110-116 and 126-132)]], each of said disks having a portion [[(134)]] projecting beyond the surfaces of said knurling wheels to create grooves [[(136)]] in the support tape [[(100)]], the spacing between said grooves [[(136)]] constituting forming said pattern characterizing resembling said plate or said series of polycrystalline silicon plates.

30. (currently amended) A method according to claim[[s]] 7 and ~~26, characterized in that~~ wherein each of said rollers [[(92, 94)]] is made up of at least two knurling wheels revolving about an axis of rotation, each having a face forming an embossing face, at least one of said knurling wheels including longitudinal ribs [[(134)]] parallel to said axis of rotation.

31. (new) A method according to claim 11, wherein said support presents a thickness lying in the range of 200 μm to 300 μm .